TYPES OF CHEMICAL REACTIONS

Section A: Fill in the Blanks

Fill in the blanks below using words/phrases from the word bank below. Words may be used **once, more than once** or **not at all**.

WORD BANK	
SINGLE DISPLACEMENT	FIVE
DECOMPOSITION	DOUBLE DISPLACEMENT
COMBINATION	ONE
TWO	THREE

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1. There are _____ major types of chemical reactions.

2. A synthesis or _____reaction occurs when two or more substances combine to form ONE substance.
   e.g. A + B → AB

3. A _____ reaction occurs when a single substance breaks down into TWO or more substances.
   e.g. AB → A + B

4. A _____or single replacement reaction occurs when ONE element replaces another element in a compound.
   e.g. A + BC → AC + B

5. A _____ or double replacement reaction occurs when the positive ions in two compounds replace each other.
   e.g. AB + CD → CB + AD

LIVEWORKSHEETS

Section B: Identifying Combination and Decomposition Reactions

Balance the equations below. Indicate whether the reaction is a **COMBINATION** or **DECOMPOSITION** reaction by writing in the appropriate word under type of chemical reaction.
Examples are provided below:

1 H_2 + **1** Cl_2 → **2** HCl Type of Chemical Reaction: **Combination**

2 MgO → **2** Mg + **1** O_2 Type of Chemical Reaction: **Decomposition**

EQUATION	TYPE OF REACTION
1. ___NH_3 → ___N_2 + ___H_2	_____
2. ___Al + ___O_2 → ____Al_2O_3	_____
3. ___P_2O_3 → ___P_4 + ___O_2	_____
4. ____K + _____O_2 → _____K_2O	_____
5. _____$NaNO_3$ → ___$NaNO_2$ + ____O_2	_____
6. _____Si + ____Cl_2 → _____$SiCl_4$	_____

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Section C: Identifying Single and Double Displacement Reactions

Balance the equations below. Indicate the type of displacement reaction by writing SINGLE or
DOUBLE in the space provided. Examples are provided below.

1 Cu + **2** $AgNO_3 \rightarrow$ **2** Ag + **1** $Cu(NO_3)_2$ Reaction: Single Displacement

1 $CuSO_4$ + **2** $NaOH \rightarrow$ **1** Na_2SO_4 + **1** $Cu(OH)_2$ Reaction: Double Displacement

EQUATION	TYPE OF REACTION
1. ___Cl_2 + ___$KI \rightarrow$ ____KCl + _____I_2	_____ DISPLACEMENT
2. ___K_2CO_3 +___ $BaCl_2 \rightarrow$ ___KCl + ____$BaCO_3$	_____ DISPLACEMENT
3. ___Na + ____$MgCl_2 \rightarrow$ ____$NaCl$ + ____Mg	_____ DISPLACEMENT
4. ___Al + _____$CuCl_2 \rightarrow$ _____$AlCl_3$ + ____Cu	_____ DISPLACEMENT
5. ___Al + ____$Pb(NO_3)_2 \rightarrow$ _____$Al(NO_3)_3$ + ____Pb	_____ DISPLACEMENT
6. ___$AgNO_3$ + ___$CaBr_2 \rightarrow$ ___$AgBr$ + ____$Ca(NO_3)_2$	_____ DISPLACEMENT

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